

DELAWARE BASIN EAST

BULLDOG PROSPECT (NM-E)

VALOR PROJECT (BULLDOG 2533)

VALOR FED COM 708H

ST01

Design: ST01

Standard Survey Report

03 June, 2020

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well VALOR FED COM 708H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Site:	VALOR PROJECT (BULLDOG 2533)	MD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Well:	VALOR FED COM 708H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	edm

Project	BULLDOG PROSPECT (NM-E)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well	VALOR FED COM 708H, ACTIVE			
Well Position	+N/-S	0.0 usft	Northing:	398,643.30 usft
	+E/-W	0.0 usft	Easting:	742,889.60 usft
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft
			Latitude:	32° 5' 36.810 N
			Longitude:	103° 32' 56.466 W
			Ground Level:	3,325.0 usft

Wellbore	ST01				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	5/21/2020	6.65	59.82	47,530.80909960

Design	ST01				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	12,251.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	177.39	

Survey Program	Date	6/3/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
122.0	1,114.0	MWD-SURFACE (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction	
1,244.0	11,615.0	MWD-INTERMEDIATE (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction	
11,654.0	12,251.0	MWD-CURVE/LATERAL (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction	
12,268.0	19,979.0	MWD-CURVE/LATERAL (ST01)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
122.0	0.18	17.99	122.0	0.2	0.1	-0.2	0.15	0.15	0.00	
211.0	0.48	197.64	211.0	0.0	0.0	0.0	0.74	0.34	201.85	
413.0	0.75	206.16	413.0	-2.0	-0.8	2.0	0.14	0.13	4.22	
503.0	0.75	200.36	503.0	-3.1	-1.3	3.1	0.08	0.00	-6.44	
590.0	0.79	208.06	590.0	-4.2	-1.8	4.1	0.13	0.05	8.85	
677.0	0.97	197.81	677.0	-5.4	-2.3	5.3	0.27	0.21	-11.78	
852.0	1.10	201.59	851.9	-8.4	-3.4	8.2	0.08	0.07	2.16	
938.0	0.88	212.84	937.9	-9.7	-4.0	9.5	0.34	-0.26	13.08	
1,027.0	1.32	205.55	1,026.9	-11.2	-4.8	11.0	0.52	0.49	-8.19	
1,114.0	1.36	208.89	1,113.9	-13.0	-5.8	12.7	0.10	0.05	3.84	
1,244.0	1.53	231.10	1,243.8	-15.4	-7.9	15.1	0.45	0.13	17.08	
1,338.0	1.19	231.41	1,337.8	-16.8	-9.6	16.4	0.36	-0.36	0.33	

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Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	edm

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,432.0	1.30	226.65	1,431.8	-18.2	-11.2	17.7	0.16	0.12	-5.06
1,526.0	1.29	220.71	1,525.8	-19.7	-12.6	19.1	0.14	-0.01	-6.32
1,620.0	1.41	223.04	1,619.7	-21.4	-14.1	20.7	0.14	0.13	2.48
1,714.0	1.45	228.98	1,713.7	-23.0	-15.8	22.3	0.16	0.04	6.32
1,809.0	0.65	104.05	1,808.7	-23.9	-16.2	23.2	2.00	-0.84	-131.51
1,903.0	0.88	111.15	1,902.7	-24.3	-15.0	23.6	0.26	0.24	7.55
1,997.0	1.01	119.69	1,996.7	-25.0	-13.6	24.3	0.20	0.14	9.09
2,092.0	0.77	111.41	2,091.7	-25.6	-12.3	25.0	0.29	-0.25	-8.72
2,186.0	0.70	99.29	2,185.7	-25.9	-11.1	25.4	0.18	-0.07	-12.89
2,280.0	0.76	100.42	2,279.7	-26.2	-9.9	25.7	0.07	0.06	1.20
2,374.0	0.83	93.90	2,373.6	-26.3	-8.6	25.9	0.12	0.07	-6.94
2,469.0	1.13	87.52	2,468.6	-26.3	-7.0	26.0	0.34	0.32	-6.72
2,563.0	1.54	79.77	2,562.6	-26.1	-4.8	25.8	0.48	0.44	-8.24
2,657.0	1.77	82.68	2,656.6	-25.6	-2.2	25.5	0.26	0.24	3.10
2,751.0	1.93	81.37	2,750.5	-25.2	0.8	25.2	0.18	0.17	-1.39
2,846.0	1.97	81.07	2,845.5	-24.7	4.0	24.9	0.04	0.04	-0.32
2,941.0	2.17	68.16	2,940.4	-23.8	7.3	24.1	0.53	0.21	-13.59
3,035.0	2.50	70.69	3,034.3	-22.5	10.9	22.9	0.37	0.35	2.69
3,130.0	3.02	72.93	3,129.2	-21.0	15.3	21.7	0.56	0.55	2.36
3,224.0	3.68	74.90	3,223.1	-19.5	20.5	20.4	0.71	0.70	2.10
3,318.0	3.90	73.95	3,316.8	-17.9	26.5	19.1	0.24	0.23	-1.01
3,412.0	4.02	76.87	3,410.6	-16.2	32.8	17.7	0.25	0.13	3.11
3,507.0	3.93	74.21	3,505.4	-14.6	39.2	16.4	0.22	-0.09	-2.80
3,601.0	3.69	77.17	3,599.2	-13.0	45.2	15.1	0.33	-0.26	3.15
3,696.0	3.50	83.00	3,694.0	-12.0	51.1	14.3	0.43	-0.20	6.14
3,790.0	3.24	79.50	3,787.8	-11.2	56.5	13.7	0.35	-0.28	-3.72
3,885.0	3.70	77.02	3,882.7	-10.0	62.2	12.8	0.51	0.48	-2.61
3,979.0	3.86	72.24	3,976.5	-8.3	68.1	11.4	0.38	0.17	-5.09
4,073.0	3.79	70.94	4,070.2	-6.4	74.1	9.7	0.12	-0.07	-1.38
4,168.0	3.63	69.27	4,165.0	-4.3	79.9	7.9	0.20	-0.17	-1.76
4,262.0	3.80	63.01	4,258.9	-1.8	85.4	5.7	0.47	0.18	-6.66
4,356.0	4.58	68.44	4,352.6	1.0	91.7	3.2	0.93	0.83	5.78
4,450.0	4.69	75.92	4,446.3	3.3	98.9	1.2	0.65	0.12	7.96
4,545.0	2.82	51.63	4,541.1	5.7	104.5	-0.9	2.54	-1.97	-25.57
4,639.0	2.34	59.14	4,635.0	8.1	108.0	-3.2	0.62	-0.51	7.99
4,733.0	3.09	79.85	4,728.9	9.5	112.1	-4.4	1.30	0.80	22.03
4,827.0	2.85	77.96	4,822.8	10.5	116.9	-5.1	0.28	-0.26	-2.01
4,922.0	2.41	72.43	4,917.7	11.6	121.1	-6.0	0.53	-0.46	-5.82
5,016.0	2.08	72.98	5,011.6	12.7	124.6	-7.0	0.35	-0.35	0.59
5,110.0	1.77	73.35	5,105.5	13.6	127.6	-7.8	0.33	-0.33	0.39
5,204.0	1.45	74.87	5,199.5	14.3	130.2	-8.4	0.34	-0.34	1.62
5,298.0	1.29	78.76	5,293.5	14.8	132.4	-8.8	0.20	-0.17	4.14
5,392.0	1.53	80.17	5,387.4	15.2	134.6	-9.1	0.26	0.26	1.50

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Design:	ST01	Database:	edm

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,486.0	1.31	82.99	5,481.4	15.6	136.9	-9.3	0.25	-0.23	3.00
5,581.0	1.15	80.69	5,576.4	15.9	139.0	-9.5	0.18	-0.17	-2.42
5,675.0	1.46	71.46	5,670.4	16.4	141.0	-10.0	0.40	0.33	-9.82
5,770.0	1.54	77.20	5,765.3	17.1	143.4	-10.5	0.18	0.08	6.04
5,864.0	1.41	79.36	5,859.3	17.6	145.8	-10.9	0.15	-0.14	2.30
5,958.0	2.16	45.46	5,953.3	19.0	148.2	-12.3	1.34	0.80	-36.06
6,052.0	2.49	41.16	6,047.2	21.8	150.8	-14.9	0.40	0.35	-4.57
6,146.0	1.94	41.12	6,141.1	24.5	153.2	-17.5	0.59	-0.59	-0.04
6,240.0	2.09	34.24	6,235.1	27.2	155.2	-20.1	0.30	0.16	-7.32
6,334.0	2.12	37.34	6,329.0	30.0	157.2	-22.8	0.13	0.03	3.30
6,428.0	2.13	34.76	6,422.9	32.8	159.3	-25.5	0.10	0.01	-2.74
6,523.0	2.19	42.57	6,517.9	35.6	161.5	-28.2	0.32	0.06	8.22
6,617.0	2.39	42.31	6,611.8	38.3	164.0	-30.8	0.21	0.21	-0.28
6,711.0	2.17	43.04	6,705.7	41.1	166.6	-33.5	0.24	-0.23	0.78
6,806.0	2.18	41.94	6,800.6	43.7	169.0	-36.0	0.05	0.01	-1.16
6,900.0	1.86	45.51	6,894.6	46.1	171.3	-38.3	0.37	-0.34	3.80
6,994.0	1.98	46.56	6,988.5	48.3	173.6	-40.4	0.13	0.13	1.12
7,089.0	1.71	49.62	7,083.5	50.4	175.8	-42.3	0.30	-0.28	3.22
7,183.0	1.53	54.48	7,177.4	52.0	177.9	-43.9	0.24	-0.19	5.17
7,277.0	1.43	46.25	7,271.4	53.6	179.8	-45.3	0.25	-0.11	-8.76
7,372.0	1.25	45.64	7,366.4	55.1	181.4	-46.8	0.19	-0.19	-0.64
7,466.0	1.31	49.20	7,460.4	56.5	182.9	-48.1	0.11	0.06	3.79
7,560.0	1.25	45.22	7,554.3	57.9	184.5	-49.5	0.11	-0.06	-4.23
7,655.0	1.15	57.60	7,649.3	59.2	186.0	-50.6	0.29	-0.11	13.03
7,749.0	0.89	62.39	7,743.3	60.0	187.5	-51.4	0.29	-0.28	5.10
7,843.0	1.05	64.23	7,837.3	60.7	188.9	-52.1	0.17	0.17	1.96
7,938.0	0.93	64.38	7,932.3	61.4	190.4	-52.7	0.13	-0.13	0.16
8,032.0	0.91	60.56	8,026.3	62.1	191.7	-53.4	0.07	-0.02	-4.06
8,126.0	0.97	72.39	8,120.3	62.8	193.1	-53.9	0.22	0.06	12.59
8,220.0	3.26	10.18	8,214.2	65.6	194.3	-56.7	3.12	2.44	-66.18
8,314.0	3.60	8.59	8,308.0	71.2	195.2	-62.2	0.38	0.36	-1.69
8,408.0	3.47	7.48	8,401.8	76.9	196.1	-67.9	0.16	-0.14	-1.18
8,503.0	2.84	1.97	8,496.7	82.1	196.5	-73.1	0.74	-0.66	-5.80
8,597.0	2.57	37.44	8,590.6	86.1	197.9	-77.0	1.77	-0.29	37.73
8,691.0	2.43	48.08	8,684.5	89.1	200.6	-79.9	0.51	-0.15	11.32
8,785.0	2.18	44.40	8,778.4	91.7	203.4	-82.4	0.31	-0.27	-3.91
8,879.0	1.99	52.36	8,872.4	94.0	205.9	-84.5	0.37	-0.20	8.47
8,974.0	2.44	79.47	8,967.3	95.4	209.2	-85.8	1.19	0.47	28.54
9,068.0	2.27	86.51	9,061.2	95.9	213.0	-86.1	0.36	-0.18	7.49
9,163.0	1.96	80.06	9,156.2	96.3	216.5	-86.3	0.41	-0.33	-6.79
9,258.0	1.23	82.93	9,251.1	96.7	219.1	-86.6	0.77	-0.77	3.02
9,352.0	0.62	81.93	9,345.1	96.9	220.6	-86.7	0.65	-0.65	-1.06
9,446.0	0.68	7.25	9,439.1	97.5	221.2	-87.3	0.84	0.06	-79.45
9,541.0	0.60	324.48	9,534.1	98.4	221.0	-88.3	0.50	-0.08	-45.02

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9,635.0	1.25	335.64	9,628.1	99.8	220.3	-89.6	0.71	0.69	11.87
9,729.0	1.44	350.09	9,722.1	101.9	219.7	-91.8	0.41	0.20	15.37
9,824.0	2.31	22.07	9,817.0	104.8	220.2	-94.7	1.40	0.92	33.66
9,918.0	1.88	10.21	9,911.0	108.1	221.1	-97.9	0.65	-0.46	-12.62
10,013.0	1.82	342.27	10,005.9	111.1	221.0	-100.9	0.94	-0.06	-29.41
10,107.0	1.85	344.10	10,099.9	114.0	220.1	-103.8	0.07	0.03	1.95
10,201.0	2.07	336.17	10,193.8	117.0	219.0	-106.9	0.37	0.23	-8.44
10,295.0	1.46	341.87	10,287.8	119.7	217.9	-109.6	0.67	-0.65	6.06
10,390.0	1.42	329.20	10,382.7	121.8	217.0	-111.8	0.34	-0.04	-13.34
10,484.0	0.98	312.69	10,476.7	123.4	215.8	-113.4	0.59	-0.47	-17.56
10,578.0	0.78	276.35	10,570.7	124.0	214.5	-114.1	0.62	-0.21	-38.66
10,673.0	0.29	24.23	10,665.7	124.3	214.0	-114.4	0.96	-0.52	113.56
10,767.0	0.41	48.85	10,759.7	124.7	214.3	-114.8	0.20	0.13	26.19
10,861.0	0.46	110.39	10,853.7	124.8	215.0	-114.9	0.48	0.05	65.47
10,955.0	0.80	123.20	10,947.7	124.3	215.9	-114.3	0.39	0.36	13.63
11,050.0	0.43	136.64	11,042.7	123.7	216.7	-113.7	0.42	-0.39	14.15
11,144.0	0.58	146.84	11,136.7	123.0	217.2	-113.0	0.19	0.16	10.85
11,238.0	0.78	190.25	11,230.7	122.0	217.3	-112.0	0.57	0.21	46.18
11,333.0	1.86	206.68	11,325.6	120.0	216.5	-110.0	1.19	1.14	17.29
11,427.0	2.11	188.60	11,419.6	116.9	215.6	-107.0	0.71	0.27	-19.23
11,521.0	2.48	211.05	11,513.5	113.5	214.2	-103.6	1.03	0.39	23.88
11,615.0	3.20	215.00	11,607.4	109.6	211.7	-99.8	0.79	0.77	4.20
11,654.0	3.41	220.03	11,646.3	107.8	210.3	-98.1	0.92	0.54	12.90
11,779.0	3.37	227.13	11,771.1	102.4	205.2	-93.0	0.34	-0.03	5.68
11,874.0	3.53	218.94	11,865.9	98.3	201.4	-89.0	0.54	0.17	-8.62
11,968.0	6.22	191.89	11,959.6	91.0	198.5	-81.9	3.69	2.86	-28.78
12,015.0	12.75	178.12	12,005.9	83.3	198.1	-74.2	14.61	13.89	-29.30
12,062.0	21.14	172.17	12,050.9	69.7	199.5	-60.6	18.21	17.85	-12.66
12,109.0	29.09	168.58	12,093.4	50.1	202.9	-40.8	17.22	16.91	-7.64
12,157.0	31.47	169.42	12,134.8	26.4	207.5	-16.9	5.04	4.96	1.75
12,204.0	39.36	171.48	12,173.1	-0.5	212.0	10.1	16.98	16.79	4.38
12,251.0	40.61	172.44	12,209.1	-30.4	216.2	40.2	2.97	2.66	2.04
12,268.0	39.73	173.81	12,222.1	-41.3	217.5	51.1	7.34	-5.18	8.06
12,315.0	41.36	179.99	12,257.8	-71.8	219.1	81.7	9.22	3.47	13.15
12,363.0	43.93	184.02	12,293.2	-104.2	218.0	114.0	7.81	5.35	8.40
12,410.0	53.79	186.88	12,324.0	-139.4	214.5	149.0	21.47	20.98	6.09
12,457.0	54.77	186.03	12,351.5	-177.3	210.2	186.7	2.55	2.09	-1.81
12,504.0	57.49	185.39	12,377.7	-216.2	206.4	225.3	5.90	5.79	-1.36
12,551.0	59.30	185.18	12,402.3	-256.0	202.7	265.0	3.87	3.85	-0.45
12,597.0	62.21	185.71	12,424.8	-296.0	198.9	304.7	6.41	6.33	1.15
12,646.0	68.63	186.46	12,445.1	-340.2	194.1	348.7	13.18	13.10	1.53
12,692.0	76.75	186.15	12,458.8	-383.9	189.3	392.1	17.66	17.65	-0.67
12,740.0	82.78	186.89	12,467.3	-430.8	184.0	438.7	12.65	12.56	1.54

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well VALOR FED COM 708H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Site:	VALOR PROJECT (BULLDOG 2533)	MD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Well:	VALOR FED COM 708H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	edm

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,777.0	87.41	186.16	12,470.5	-467.4	179.8	475.1	12.67	12.51	-1.97
12,834.0	87.01	185.04	12,473.3	-524.0	174.2	531.4	2.08	-0.70	-1.96
12,928.0	90.48	183.70	12,475.3	-617.7	167.1	624.7	3.96	3.69	-1.43
12,936.0	90.33	182.84	12,475.3	-625.7	166.6	632.7	10.91	-1.88	-10.75
13,030.0	89.26	179.13	12,475.6	-719.7	165.0	726.5	4.11	-1.14	-3.95
13,125.0	90.17	180.51	12,476.1	-814.7	165.3	821.4	1.74	0.96	1.45
13,219.0	89.67	180.94	12,476.2	-908.7	164.1	915.2	0.70	-0.53	0.46
13,313.0	90.32	181.96	12,476.2	-1,002.6	161.7	1,009.0	1.29	0.69	1.09
13,407.0	91.10	183.65	12,475.1	-1,096.5	157.1	1,102.5	1.98	0.83	1.80
13,502.0	90.29	182.69	12,473.9	-1,191.4	151.9	1,197.0	1.32	-0.85	-1.01
13,597.0	91.17	183.73	12,472.7	-1,286.2	146.5	1,291.5	1.43	0.93	1.09
13,691.0	89.65	181.58	12,472.0	-1,380.1	142.2	1,385.1	2.80	-1.62	-2.29
13,785.0	90.54	183.13	12,471.9	-1,474.0	138.3	1,478.8	1.90	0.95	1.65
13,879.0	89.04	181.33	12,472.2	-1,567.9	134.7	1,572.4	2.49	-1.60	-1.91
13,973.0	88.49	181.63	12,474.2	-1,661.9	132.2	1,666.2	0.67	-0.59	0.32
14,067.0	88.15	178.71	12,477.0	-1,755.8	132.0	1,760.0	3.13	-0.36	-3.11
14,161.0	88.84	176.73	12,479.5	-1,849.7	135.7	1,854.0	2.23	0.73	-2.11
14,256.0	89.35	177.24	12,481.0	-1,944.6	140.7	1,949.0	0.76	0.54	0.54
14,351.0	90.50	177.15	12,481.1	-2,039.5	145.3	2,044.0	1.21	1.21	-0.09
14,446.0	91.65	178.60	12,479.3	-2,134.4	148.9	2,138.9	1.95	1.21	1.53
14,540.0	90.12	177.56	12,477.9	-2,228.3	152.0	2,232.9	1.97	-1.63	-1.11
14,635.0	89.03	176.72	12,478.6	-2,323.2	156.8	2,327.9	1.45	-1.15	-0.88
14,729.0	90.34	178.73	12,479.1	-2,417.1	160.5	2,421.9	2.55	1.39	2.14
14,824.0	88.87	175.85	12,479.7	-2,512.0	165.0	2,516.9	3.40	-1.55	-3.03
14,919.0	90.92	175.89	12,479.9	-2,606.7	171.8	2,611.8	2.16	2.16	0.04
15,013.0	89.47	175.29	12,479.6	-2,700.4	179.0	2,705.8	1.67	-1.54	-0.64
15,107.0	88.86	173.85	12,481.0	-2,794.0	187.9	2,799.7	1.66	-0.65	-1.53
15,201.0	90.95	175.09	12,481.1	-2,887.6	197.0	2,893.5	2.59	2.22	1.32
15,295.0	90.99	176.11	12,479.5	-2,981.3	204.2	2,987.5	1.09	0.04	1.09
15,390.0	90.05	174.37	12,478.7	-3,075.9	212.1	3,082.4	2.08	-0.99	-1.83
15,485.0	88.81	174.40	12,479.6	-3,170.5	221.4	3,177.3	1.31	-1.31	0.03
15,579.0	89.77	174.60	12,480.8	-3,264.0	230.4	3,271.1	1.04	1.02	0.21
15,673.0	90.02	174.07	12,480.9	-3,357.6	239.7	3,365.0	0.62	0.27	-0.56
15,767.0	89.93	174.71	12,481.0	-3,451.1	248.9	3,458.9	0.69	-0.10	0.68
15,861.0	90.58	176.34	12,480.6	-3,544.8	256.2	3,552.8	1.87	0.69	1.73
15,956.0	89.10	176.20	12,480.8	-3,639.6	262.4	3,647.8	1.56	-1.56	-0.15
16,050.0	90.57	179.20	12,481.1	-3,733.5	266.2	3,741.8	3.55	1.56	3.19
16,144.0	89.27	179.50	12,481.2	-3,827.5	267.2	3,835.7	1.42	-1.38	0.32
16,239.0	90.53	177.58	12,481.4	-3,922.5	269.6	3,930.7	2.42	1.33	-2.02
16,333.0	89.88	178.00	12,481.1	-4,016.4	273.3	4,024.7	0.82	-0.69	0.45
16,428.0	89.60	184.31	12,481.5	-4,111.3	271.3	4,119.4	6.65	-0.29	6.64
16,522.0	88.17	181.94	12,483.3	-4,205.2	266.2	4,212.9	2.94	-1.52	-2.52
16,616.0	86.18	176.80	12,488.0	-4,299.0	267.3	4,306.7	5.86	-2.12	-5.47

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well VALOR FED COM 708H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Site:	VALOR PROJECT (BULLDOG 2533)	MD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Well:	VALOR FED COM 708H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	edm

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,711.0	87.04	176.41	12,493.6	-4,393.7	272.9	4,401.6	0.99	0.91	-0.41
16,805.0	88.30	176.80	12,497.4	-4,487.4	278.4	4,495.5	1.40	1.34	0.41
16,900.0	89.54	177.16	12,499.2	-4,582.3	283.4	4,590.5	1.36	1.31	0.38
16,995.0	89.01	174.34	12,500.4	-4,677.0	290.5	4,685.4	3.02	-0.56	-2.97
17,090.0	89.14	173.60	12,501.9	-4,771.5	300.5	4,780.2	0.79	0.14	-0.78
17,184.0	88.39	173.30	12,504.0	-4,864.8	311.2	4,874.0	0.86	-0.80	-0.32
17,279.0	90.15	175.37	12,505.2	-4,959.4	320.5	4,968.8	2.86	1.85	2.18
17,373.0	90.57	177.52	12,504.6	-5,053.2	326.4	5,062.8	2.33	0.45	2.29
17,467.0	89.65	177.34	12,504.4	-5,147.1	330.6	5,156.8	1.00	-0.98	-0.19
17,561.0	90.65	177.53	12,504.1	-5,241.0	334.8	5,250.8	1.08	1.06	0.20
17,656.0	89.72	177.48	12,503.8	-5,335.9	338.9	5,345.8	0.98	-0.98	-0.05
17,750.0	90.21	179.95	12,503.9	-5,429.9	341.0	5,439.8	2.68	0.52	2.63
17,845.0	89.96	179.41	12,503.8	-5,524.9	341.6	5,534.7	0.63	-0.26	-0.57
17,939.0	91.77	181.20	12,502.3	-5,618.8	341.1	5,628.5	2.71	1.93	1.90
18,034.0	90.79	179.15	12,500.2	-5,713.8	340.8	5,723.4	2.39	-1.03	-2.16
18,128.0	90.52	178.80	12,499.1	-5,807.8	342.5	5,817.4	0.47	-0.29	-0.37
18,222.0	89.68	178.88	12,499.0	-5,901.8	344.4	5,911.3	0.90	-0.89	0.09
18,317.0	89.72	180.21	12,499.5	-5,996.8	345.1	6,006.3	1.40	0.04	1.40
18,411.0	89.05	180.10	12,500.5	-6,090.8	344.9	6,100.1	0.72	-0.71	-0.12
18,505.0	88.89	179.37	12,502.2	-6,184.7	345.3	6,194.0	0.79	-0.17	-0.78
18,599.0	91.36	180.11	12,502.0	-6,278.7	345.7	6,288.0	2.74	2.63	0.79
18,693.0	92.32	181.02	12,499.0	-6,372.7	344.8	6,381.8	1.41	1.02	0.97
18,788.0	90.59	181.88	12,496.5	-6,467.6	342.4	6,476.5	2.03	-1.82	0.91
18,882.0	89.59	180.66	12,496.4	-6,561.6	340.3	6,570.3	1.68	-1.06	-1.30
18,976.0	91.65	182.08	12,495.4	-6,655.5	338.1	6,664.0	2.66	2.19	1.51
19,070.0	92.78	182.19	12,491.7	-6,749.4	334.6	6,757.6	1.21	1.20	0.12
19,164.0	90.35	180.76	12,489.2	-6,843.3	332.2	6,851.4	3.00	-2.59	-1.52
19,258.0	89.64	180.52	12,489.2	-6,937.3	331.1	6,945.2	0.80	-0.76	-0.26
19,352.0	90.41	180.83	12,489.1	-7,031.3	330.0	7,039.0	0.88	0.82	0.33
19,446.0	88.44	178.78	12,490.1	-7,125.3	330.3	7,132.9	3.02	-2.10	-2.18
19,541.0	88.96	178.92	12,492.2	-7,220.3	332.2	7,227.9	0.57	0.55	0.15
19,635.0	88.60	179.85	12,494.2	-7,314.2	333.2	7,321.8	1.06	-0.38	0.99
19,729.0	90.26	178.84	12,495.2	-7,408.2	334.3	7,415.8	2.07	1.77	-1.07
19,823.0	89.30	175.77	12,495.5	-7,502.1	338.7	7,509.7	3.42	-1.02	-3.27
19,908.0	90.08	175.88	12,496.0	-7,586.9	344.9	7,594.7	0.93	0.92	0.13
LAST MWD @ 19908'MD									
19,929.5	90.08	175.88	12,496.0	-7,608.3	346.5	7,616.2	0.00	0.00	0.00
LTP @ 19929.5'MD									
19,979.0	90.08	175.89	12,495.9	-7,657.7	350.0	7,665.7	0.02	0.00	0.02
PTD @ 19979'MD									

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well VALOR FED COM 708H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Site:	VALOR PROJECT (BULLDOG 2533)	MD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Well:	VALOR FED COM 708H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	edm

Design Targets

Target Name

- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
FTP (VALOR FED CC	0.00	0.00	12,450.0	112.1	189.0	398,755.40	743,078.60	32° 5' 37.905 N	103° 32' 54.260 W
- actual wellpath misses target center by 266.8usft at 12332.7usft MD (12271.0 TVD, -83.5 N, 219.0 E)									
- Circle (radius 50.0)									
LTP (VALOR FED CO	0.00	0.00	12,485.0	-7,609.9	348.8	391,033.40	743,238.40	32° 4' 21.479 N	103° 32' 53.056 W
- actual wellpath misses target center by 11.3usft at 19929.5usft MD (12496.0 TVD, -7608.3 N, 346.5 E)									
- Point									
PBHL (VALOR FED C	0.44	359.56	12,485.0	-7,659.9	349.2	390,983.40	743,238.80	32° 4' 20.984 N	103° 32' 53.055 W
- actual wellpath misses target center by 11.2usft at 19979.0usft MD (12495.9 TVD, -7657.7 N, 350.0 E)									
- Rectangle (sides W100.0 H2,418.0 D20.0)									

Design Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
19,908.0	12,496.0	-7,586.9	344.9	LAST MWD @ 19908'MD
19,929.5	12,496.0	-7,608.3	346.5	LTP @ 19929.5'MD
19,979.0	12,495.9	-7,657.7	350.0	PTD @ 19979'MD

Checked By: _____ Approved By: _____ Date: _____